

I. INTRODUCTION

- A. Purpose: This instruction is to provide policies, procedures, and guidelines for Los Angeles County Fire Department personnel utilizing portable fire extinguishers.
- B. Scope: This instruction applies to all employees involved in the discharge, care, and maintenance of portable fire extinguishers.
 - 1. This includes both training and actual emergencies.
 - 2. This instruction applies to sworn and civilian employees conducting product testing using live fire situations.
 - 3. This instruction does not apply to training burns conducted for the purposes of recruit training at a recognized Department training facility designated for such a purpose.
 - a. Recruit Training shall be under the direction of Training Services Section.
- C. Author: The Deputy Fire Chief of the Special Operations Bureau is responsible for the content, revision, and periodic review of this instruction.
- D. Reference: Employees may refer to the following resources for more information regarding mounting, class ratings, and periodic maintenance requirements.
 - 1. National Fire Protection Association Standard #10, 2005 edition.
 - 2. Los Angeles County Fire Code, 2002 edition.
 - 3. Fire extinguisher manufacturer's use and maintenance guidelines.

II. RESPONSIBILITY

- A. Training Services Section shall be responsible for coordinating in-service training for Department personnel in the operation, care, and maintenance of portable fire extinguishers.
- B. Fire captains and other site supervisors shall be responsible for the operation, care, and maintenance of portable fire extinguishers assigned to their facilities.
 - 1. This includes but is not limited to fire apparatus, motor vehicles, fuel dispensing locations, office, classroom, and storage facilities.

II. POLICY

- A. All personnel shall follow the procedures outlined in this policy regarding the use, care, and maintenance of portable fire extinguishers.
 - 1. Refer to the manufacturers' recommended guidelines for use, care, and maintenance not covered in this policy.
- B. All personnel shall follow the "Pull, Aim, Squeeze, and Sweep" (PASS) principle while discharging a portable fire extinguisher.

III. PROCEDURES

- A. If you discover a fire:
 - 1. If civilian personnel not assigned to emergency equipment discover a fire:
 - a. Immediately activate 911.
 - b. Initiate evacuation procedures.
 - c. Personnel shall only use a fire extinguisher if they are trained and feel confident in using one.
 - d. Only attempt to extinguish a small fire. Some examples are a small trash can, stove, or small electrical appliance.
 - (1) If there is any doubt as to the ability to safely extinguish the fire, personnel shall exit and wait for emergency personnel.
 - e. Personnel shall determine if the correct portable fire extinguisher is available.
 - f. If it is determined that the fire is small and can be safely and effectively extinguished, personnel may activate and discharge the portable fire extinguisher.
 - g. While utilizing a fire extinguisher, personnel shall provide for a safe exit from the affected area at all times.

2. Sworn personnel in the course of their regular duties, when directed to discharge a portable fire extinguisher, shall select the correct portable fire extinguisher for the fuel being consumed by fire.

a. Appropriate personal protective equipment shall be worn.

B. Inspection, Care, and Maintenance:

1. Water Extinguishers:

a. Daily: Water extinguishers shall be inspected daily, ensuring they are charged, without damage to the cylinder, with all components connected according to the manufacturer's instructions, and affixed securely to the apparatus.

b. Weekly: Water extinguishers shall be inspected weekly, ensuring the hose and nozzle have not sustained any fraying or cracking, are unobstructed, and that the extinguisher is properly pressurized with the safety pin and lock seal intact.

c. Water extinguishers shall be recharged after each use.

(1) Recharging water extinguishers does not have to be performed at the Fire Extinguisher Shops.

NOTE: Completely discharge all contents and pressure prior to disassembling the extinguisher!

(2) Fill the extinguisher with water. Inside the extinguisher is a "Fill To" line. (If used, at this time, add .025 gallons of Class "A" Foam Concentrate). Secure Tube-Handle and tighten locking nut snugly with a large crescent wrench.

(a) Extinguisher shall be charged to 100 pounds per square inch (PSI).

2. Dry Chemical (ABC)

a. Daily: Dry chemical (ABC) extinguishers shall be inspected daily, ensuring they are charged, without damage to the cylinder, with all components connected according to the manufacturer's instructions, and affixed securely to the apparatus.

- b. Weekly: Dry chemical (ABC) extinguishers shall be inspected weekly, ensuring the hose and horn have not sustained any fraying or cracking, are unobstructed, and that the extinguisher is properly pressurized with the lock seal and tamper seal intact.
 - (1) Additionally, the extinguisher shall be turned upside down and shaken vigorously to prevent caking and packing of the dry chemical agent in the extinguisher. Use of a rubber mallet onto the shell of the extinguisher may assist with this effort.
- c. Dry chemical (ABC) extinguishers shall be recharged after each use. If the extinguisher has sustained partial discharge, the extinguisher shall be sent to the Fire Extinguisher Shop for service. Partial discharge will result in an extinguisher that will leak and be unreliable for emergency use.
 - (1) Upon use, partial discharge, or a reduction in pressure outside of the operable range, the extinguisher shall be tagged and sent to the Fire Extinguisher Shop for refilling, repair, and maintenance.

3. Dry Chemical (BC)

- a. Daily: Dry chemical (BC) extinguishers shall be inspected daily, ensuring the cartridge is not charged, without damage to the cylinder, with all components connected according to the manufacturer's instructions, and affixed securely to the apparatus.
- b. Weekly: Dry chemical (BC) extinguishers shall be inspected weekly, ensuring the hose and nozzle have not sustained any fraying or cracking, are unobstructed, and that the lock seal and tamper seal are intact. Ensure the CO₂ cartridge is secured to the cylinder and intact. The CO₂ cylinder contains left-handed threads and may be removed easily for visual inspection.

NOTE: If the CO₂ cartridge cannot be removed under hand pressure, immediately stop attempting to remove it. The cartridge may have a leak and the extinguisher could be charged. Include this information on a tag fixed to the handle of the fire extinguisher and send it to the Fire Extinguisher Shop for refilling, repair, and maintenance.

- (1) The extinguisher shall be turned upside down and shaken vigorously to prevent caking and packing of the dry chemical agent in the cylinder. Use of a rubber mallet onto the shell of the extinguisher may assist with this effort.

- c. Dry chemical (BC) extinguishers shall be recharged after each use. Partial discharge will result in an extinguisher that will leak and be unreliable for emergency use. Upon use, partial discharge, or a premature impact to the CO2 cartridge, the extinguisher shall be tagged and sent to the Fire Extinguisher Shop for refilling, repair, and maintenance.
4. Carbon Dioxide (CO2)
- a. Daily: Carbon dioxide (CO2) extinguishers shall be inspected daily, ensuring they are charged, without damage to the cylinder, with all components connected according to the manufacturer's instructions, and affixed securely to the apparatus.
 - b. Weekly: Carbon dioxide (CO2) extinguishers shall be inspected weekly, ensuring the hose and horn have not sustained any fraying or cracking, are unobstructed, and that the extinguisher is properly pressurized with the lock seal and tamper seal intact.
 - c. Semi-Annually: Carbon dioxide (CO2) extinguishers shall be weighed every six months with all components attached including the hose and horn. The weight of the CO2 extinguisher will identify whether or not the extinguisher is fully charged and ready for emergency use. The 25 pound CO2 extinguisher must weigh exactly 25 pounds. If the weight of the extinguisher falls below 24 pounds, the extinguisher shall be considered out of its operational range, taken out of service and sent to the Fire Extinguisher Shop for refilling, repair, and maintenance.
 - (1) Carbon dioxide (CO2) extinguishers display specific manufacturer in-service and maintenance weight requirements. These requirements are stamped upon each extinguisher cylinder. Refer to each CO2 extinguisher for specific requirements.
 - d. Carbon dioxide (CO2) extinguishers shall be recharged after each use. Partial discharge results in an extinguisher that will leak and be unreliable for emergency use. If the extinguisher has sustained partial discharge, the extinguisher shall be sent to the Fire Extinguisher Shop for refilling, repair, and maintenance.

5. Dry Powder Class D:

- a. Daily: Dry powder extinguishers shall be inspected daily, ensuring they are charged, without damage to the cylinder, with all components connected according to the manufacturer's instructions, and affixed securely to the apparatus.
- b. Weekly: Dry powder extinguishers shall be inspected weekly, ensuring the hose and horn have not sustained any fraying or cracking, are unobstructed, and that the extinguisher is properly pressurized with the lock seal and tamper seal intact.
 - (1) The extinguisher shall be turned upside down and shaken vigorously to prevent caking and packing of the dry powder agent in the cylinder.
- c. Dry powder extinguishers shall be recharged after each use. Partial discharge will result in an extinguisher that will leak and be unreliable for emergency use. Upon use, partial discharge, or a reduction in pressure outside of the operable range, the extinguisher shall be tagged and sent to the Fire Extinguisher Shop for refilling, repair, and maintenance.

6. Wet Chemical (if assigned to fire apparatus)

- a. Daily: Wet chemical extinguishers shall be inspected daily, ensuring they are charged, without damage to the cylinder, with all components connected according to the manufacturer's instructions, and affixed securely to the apparatus.
- b. Weekly: Wet chemical extinguishers shall be inspected weekly, ensuring the hose and nozzle have not sustained any fraying or cracking, are unobstructed, and that the extinguisher is properly pressurized with the safety pin and lock seal intact.
- c. Upon use, partial discharge, or a reduction in pressure outside of the operable range, the extinguisher shall be tagged and sent to the Fire Extinguisher Shop for refilling, repair, and maintenance.

C. Repair and Maintenance:

- 1. Personnel sending fire extinguishers to the Fire Extinguisher Shop shall adhere to the following procedures.

- a. Affix a tag to the handle of the extinguisher indicating:
 - (1) Station or administrative site
 - (2) Problem or repair that is required
- b. Fill out a Form 47 and tape or otherwise attach it to the extinguisher.
2. After 14 business days if the extinguisher is not returned, contact should be made with the Fire Extinguisher Shops for the status of the extinguisher.
3. If the extinguisher should be out of service for an extended period of time, provisions should be made to provide an equivalent form of fire protection.

D. Discharging a portable Fire Extinguisher:

1. An easy way to remember how to use a fire extinguisher is the acronym: P.A.S.S.
2. P.A.S.S. stands for Pull, Aim, Squeeze, and Sweep.
3. Keeping safety in mind, personnel shall adhere to the following procedures when using a portable fire extinguisher:

Step #1:

After selecting the correct portable fire extinguisher, personnel shall remove and PULL the safety pin from the handle of the portable extinguisher.



Note: If the pin is difficult to remove, it is suggested to roll the pin forward in a circular motion. This will break the lock seal.

Step #2:

Grasp the hose and AIM the nozzle or horn at the base of the fire.



Step #3:

SQUEEZE the handle



Step #4:

SWEEP the extinguishing agent at the base of the fire.

After completing a sweep at the base of the fire, STOP, LOOK, and DETERMINE if additional agent is required to confine and extinguish the fire.

If additional agent is required, repeat previous steps #2, #3, and #4.

If additional agent is not required, exit to a safe location until Fire Department personnel arrive.



E. Other Helpful Tips:

1. When extinguishing fires outside, watch for wind. Aim the extinguisher so the extinguishing agent travels in the direction of the wind, not towards you.
2. Use the buddy system when extinguishing a fire. Have someone right behind you ready to go with another fire extinguisher when yours runs out. Another method is to work together with both of you approaching the fire in a pie slice formation, extinguishing the fire simultaneously.

F. Types of Portable Fire Extinguishers:

1. Water Extinguisher - Water extinguishers contain 2 ½ gallons of extinguishing agent and are used to control and extinguish Class A Fires.



- a. There are two forms of extinguishing agent.
 - (1) Water (clear of any additives).
 - (2) Alternately, Class "A" Foam Concentrate is added at a rate of .025 gallons for each 2.5 gallon water extinguisher. This additive achieves a 1.0% Foam Solution when the extinguisher is activated.
- b. Water extinguishers weigh approximately 27 pounds.
 - (1) In cold weather areas, water extinguishers may contain loaded nozzles to protect from freezing. In this case, add approximately 5 additional pounds to the total extinguisher weight.

2. Dry Chemical (ABC) – Dry chemical extinguishers are used to control and extinguish Class A, B, and/or C Fires. The amount of extinguishing agent is based upon the size of the extinguisher as well as the extinguisher classification. Classification ratings are determined by laboratory tests and the intent of the amount of fuel that can be extinguished by the extinguisher and the person using the extinguisher.



- a. Dry chemical (ABC) extinguishers contain a combination of ABC Dry Chemical, Ammonium Phosphate, or a Sodium Bicarbonate Agent.
 - b. Dry chemical (ABC) extinguishers weigh approximately 37 pounds.
 - c. The 20-A:120-B-C dry chemical (ABC) is the most common fire extinguisher found on fire department apparatus. (Various sizes exist).
3. Dry Chemical (BC) - Dry chemical extinguishers are used to control and extinguish Class B and/or C Fires. The amount of extinguishing agent is based upon the size of the extinguisher as well as the extinguisher classification. Classification ratings are determined by laboratory tests and the intent of the amount of fuel that can be extinguished by the extinguisher and the person using the extinguisher.



- a. Extinguishers contain a combination of BC Dry Chemical and Ammonium Phosphate agents.
- b. Dry chemical (BC) extinguishers weigh approximately 20 pounds. The Dry Chemical (BC) is activated with a CO₂ cartridge attached to the outside of the cylinder.

NOTE: Never lean over the top of the cylinder. Direct the cylinder away from the body of the operator when activating the extinguisher!

4. Carbon Dioxide (CO₂) - Carbon dioxide extinguishers are used to control and extinguish Class B and/or C Fires. The amount of extinguishing agent is based upon the size of the extinguisher as well as the extinguisher classification. Classification ratings are determined by laboratory tests and the intent of the amount of fuel that can be extinguished by the extinguisher and the person using the extinguisher.



- a. Carbon dioxide extinguishers contain pressurized, carbon dioxide gas.
- b. Carbon dioxide (CO₂) extinguishers generally come in two sizes, one weighing approximately 25 pounds and the other approximately 45 pounds. The 10-B:C carbon dioxide (CO₂) is the most common fire extinguisher found on fire department apparatus.

5. Dry Powder - Class D Fire Extinguishers. Dry powder extinguishers are used to control and extinguish only Class D Fires. The amount of extinguishing agent is based upon the size of the extinguisher as well as the extinguisher classification. Classification ratings are determined by laboratory tests and the intent of the amount of fuel that can be extinguished by the extinguisher and the person using the extinguisher.



- a. Dry powder fire extinguishers contain specialized extinguishing agents specific to the fuel being consumed by fire. Sodium Chloride and Copper blended powders are just a few of the extinguishing agents.
- b. The most common agent used in a Class D extinguisher is Metal-X.
- c. Dry powder extinguishers weigh approximately 30 pounds. They contain a 10-D classification rating.

6. Wet Chemical - Class K Fire Extinguishers. Wet chemical extinguishers are used to control and extinguish only Class K Fires. The amount of extinguishing agent is based upon the size of the extinguisher as well as the extinguisher classification. Classification ratings are determined by laboratory tests and the intent of the amount of fuel that can be extinguished by the extinguisher and the person using the extinguisher.



- a. Wet chemical class K fire extinguishers contain specialized extinguishing agents specific to commercial kitchen cooking oils, deep fryers, and grills.
- b. The most common sizes of portable extinguishers are 1.5 gallon and 2.5 gallon capacity units.